

REMARKS

Claims 1-32 were canceled previously in the above-identified patent application. Claims 33-36 were previously pending and stand rejected. New claims 37-43 are being added hereby. Therefore, claims 33-43 will be pending after entry of this amendment.

Claims 34 and 36 are being amended to clarify the subject matter of those claims and not in response to the recent Office Action.

Rejection Under 35 U.S.C. §103

Claims 33-34 stand rejected under 35 U.S.C. §103 as being unpatentable over Staggs *et al.* in view of Feyereisen *et al.*

Claim 33 has been amended to recite that the TCAS resolution advisory condition triggers an increase in the size of the fractional section of the arcuate vertical speed indicator scale. That scale, which is part of the vertical speed indicator (VSI) display, typically is displayed in the cockpit of an aircraft on a larger viewing screen along with other information. When a TCAS resolution advisory condition occurs, the fractional section of the arcuate vertical speed indicator scale is enlarged on that screen in comparison to its size during normal conditions, as described in the present application on page 3, lines 6-9. Such enlargement of the fractional section of arcuate VSI scale is not suggested by the combined teachings in the cited patents.

The Staggs, *et al.* patent shows a vertical speed indicator comprising a complete circle in Figure 1 and does not disclose a fractional section of an arcuate VSI scale. Although the different crosshatch sections indicate different colored arcs of that circular

scale, those colored arcs correspond to the attribute of the VSI indicator that changes with the TCAS resolution advisory indicators as recited at the end of claim 33. As a result, this reference does not disclose a fractional section of an arcuate vertical speed indicator scale. Of primary patentable significance is the fact that the size of the scale in Staggs, *et al.* does not change under any circumstance, much less during a TCAS resolution advisory condition. The rejection recognized this lack of size change in the sentence at the bottom of page 2 of the Office Action.

As a result, the rejection cited Feyereisen, *et al.* as disclosing a given condition triggering an increase in size of an electronic display. Although Figure 2 of this second patent illustrates the same prior art circular scale display shown in Staggs, *et al.*, the description of this prior art display does not mention anything about it changing in size. The paragraphs of the Feyereisen, *et al.* patent cited in the rejection as supporting a triggering of an increase in display size relate to the new display shown in Figure 3 of this latter patent. That new form of display contains graphical elements for a wide variety of aircraft operating conditions. The only arcuate scale on this display relates to a conventional ball/attitude indicator 126. The vertical speed is indicated in the extreme upper right corner of that rectangular display and is indicated only by alphanumeric characters and a speed trend arrow 136. Paragraphs of Feyereisen, *et al.* that were cited in the office action as supporting increasing an electronic display merely teach changing the color or texture of the alphanumeric characters and the arrow for the vertical speed information (paragraphs [0065-0066]). Nothing in this patent suggests changing the size of the vertical speed display section, much less changing the size of a fractional section of the arcuate vertical speed indicator scale.

Thus, combining the teachings of Feyereisen, *et al.* with those of the Straggs, *et al.* patent merely would indicate that alphanumeric characters associated with the vertical speed indicator could be emphasized by change in color or texture. Note further that vertical speed indicator circle and associated numerical values in Figure 1 of Straggs, *et al.* extend to the boundaries of the display screen in the normal mode and nothing would suggest how it could be enlarged for emphasis and still fit on that screen.

As a consequence, the combination of the prior patents does not suggest a TCAS resolution advisory condition triggering an increase in the size of a fractional section of an arcuate vertical speed indicator scale. Therefore, claims 33 and 34 are patentable under 35 U.S.C. §103.

Claims 35-36 stand rejected under 35 U.S.C. §103 as being unpatentable over Straggs, *et al.* in view of Feyereisen, *et al.* and Gordon, *et al.*

Claim 35 has been amended to state that a fractional section of the vertical speed indicator scale changes in shape in response to changes in the vertical speed depicted by the vertical speed indicator marker. As shown in Figure 3 of the present application, when the vertical speed is at a relatively low value, the fractional section of the curved VSI scale has the shape depicted by screens 300 and 400. However, when a significantly greater vertical speed occurs, the shape of that fractional section changes as shown in the depictions 500 and 600 and described in paragraph [0020] of the application.

As noted above, the combined teachings of the Straggs, *et al.* and Feyereisen, *et al.* patents at best teaches increasing the size of alphanumeric vertical speed information or an arrow, but those patents fail to suggest changing the shape of an indicator scale. The

Gordon, *et al.* patent was cited in the Office Action solely for teaching a digital numerical display which is part of the vertical speed indicator marker recited in claim 35. This patent does not teach a fractional section of a curved vertical speed indicator scale, much less such a scale that changes in shape in response to changes in the vertical speed. Therefore, the combination of the teachings from all three patents does not suggest the subject matter of independent claim 35 in which the shape of the fractional section of the vertical speed indicator scale changes. As a result, claims 35 and 36 are patentable under 35 U.S.C. §103.

The New Claims

New claim 37 depends from claim 35 and specifies that a TCAS resolution advisory condition triggers an increase in size of the fractional section of the arcuate vertical speed indicator scale. As noted above with respect to claim 33, nothing in the combined teachings of Staggs, *et al.* and Feyereisen, *et al.* suggests such size change, nor does the Gordon, *et al.* patent provide that missing teaching.

Claim 38 which depends from claim 33 recites that the fractional section of the vertical speed indicator scale changes in shape in response to changes in the vertical speed. As discussed previously with respect to claim 35, none of the three patents cited in the Office Action remotely suggests such scale shape change and thus their combined teachings do not render this claim obvious.

New independent claim 39 specifies that the fractional section of the vertical speed indicator scale changes in shape in response to changes in the vertical speed depicted by the vertical speed indicator marker, as depicted in the various displays in Figure 3 of the

application. The combination of teachings from the Staggs, *et al.*, Feyereisen, *et al.* and Gordon, *et al.* patents does not teach this type of scale shape change. As a consequence, claim 39 and its dependent claims 40-43 are patentable.

Claims 40 and 43 also specify that the TCAS resolution advisory condition triggers an increase in size of that vertical speed indicator scale, which as previously noted is not remotely suggested by the three references relied upon in the recent Office Action.

Therefore the new claims, added by this amendment are patentable.

Conclusion

In view of these distinctions between the subject matter of the present claims and teachings of the cited patents, reconsideration and allowance of the present application are requested.

Respectfully submitted,
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